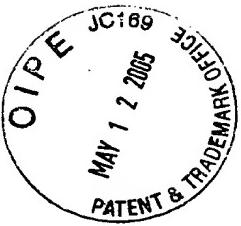
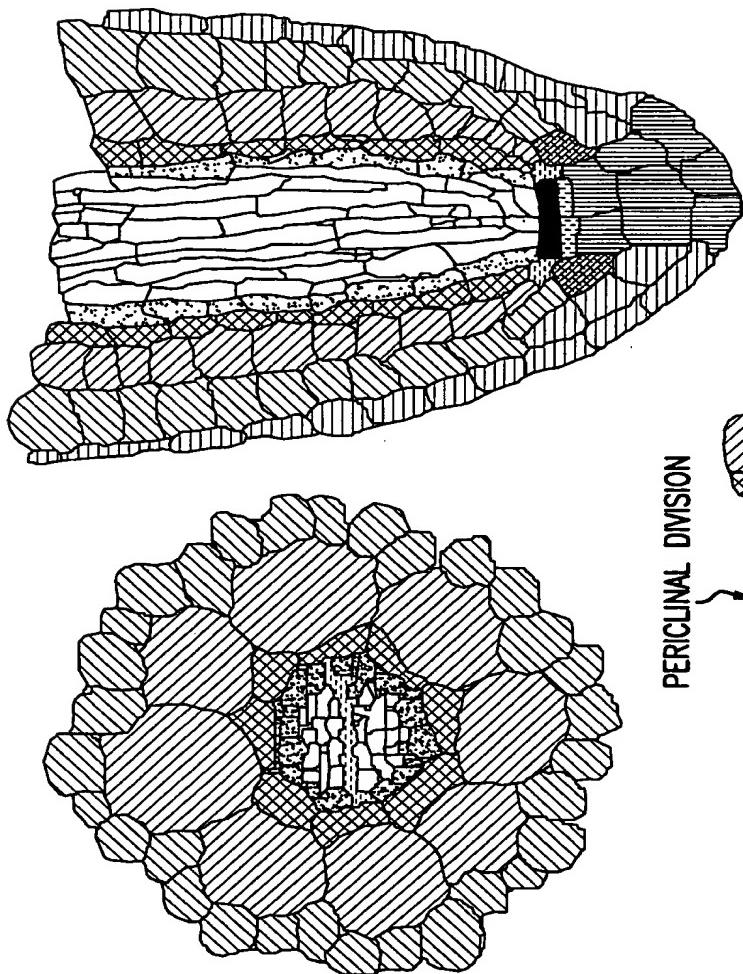


# Replacement Sheet

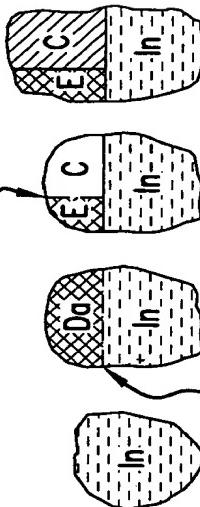


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- EPIDERMIS
- CORTEX
- ENDODERMIS
- PERICYCLE
- LATERAL ROOT CAP
- COLUMNELLA ROOT CAP
- VASCULAR TISSUE
- CORTEX/ENDODERMAL INITIAL
- EPIDERMAL/ROOT CAP INITIAL
- QUIESCENT CENTER
- COLUMNELLA ROOT CAP INITIAL



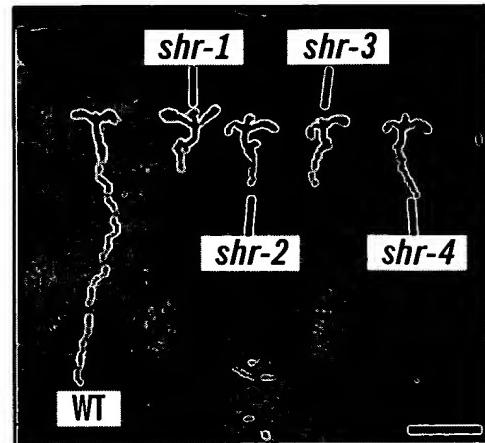
PERICLINAL DIVISION



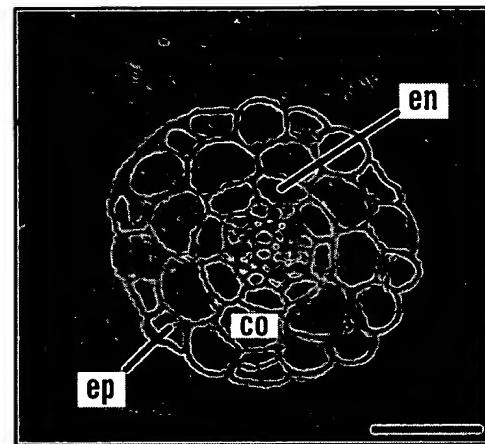
ANTICLINAL DIVISION

**FIG. 1A**

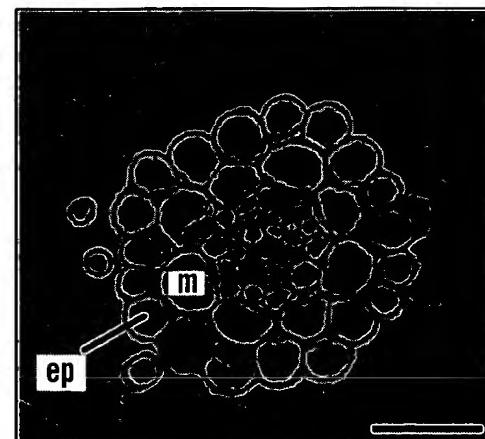
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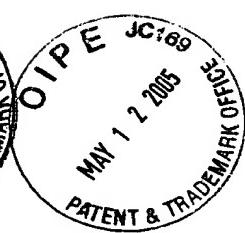
**FIG. 1B**

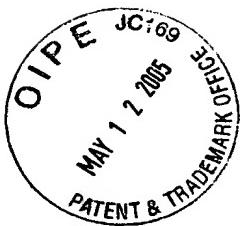


**FIG. 1C**

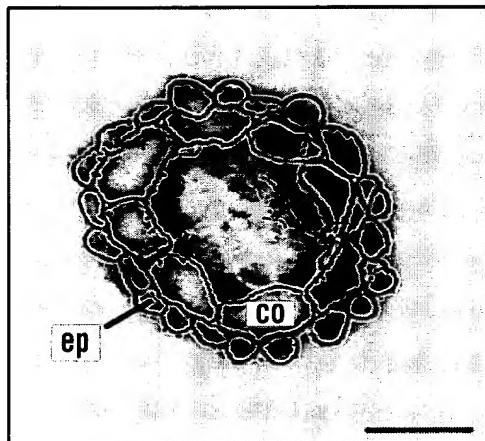


**FIG. 1D**

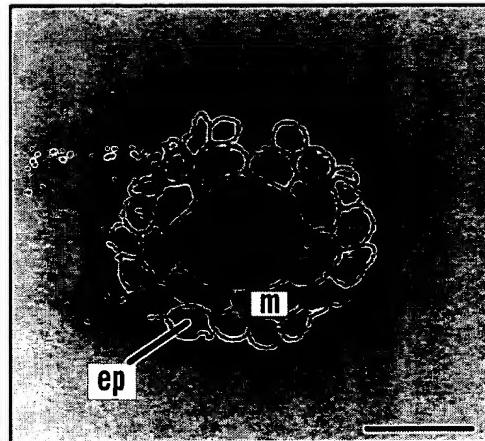




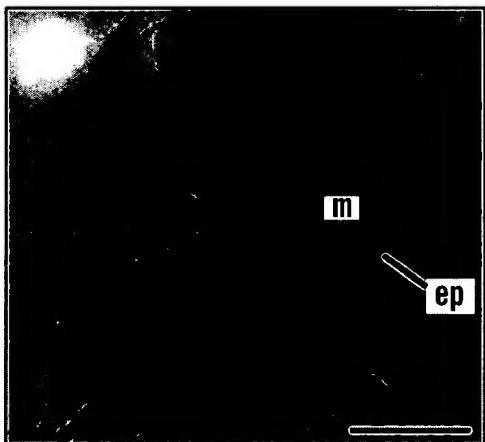
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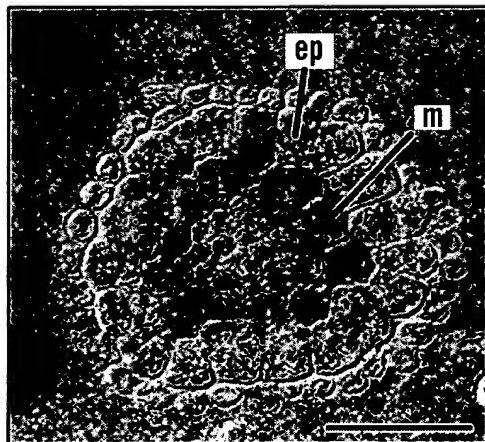
**FIG. 1E**



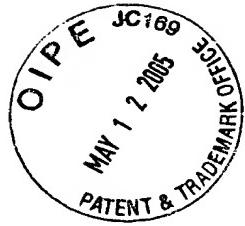
**FIG. 1F**



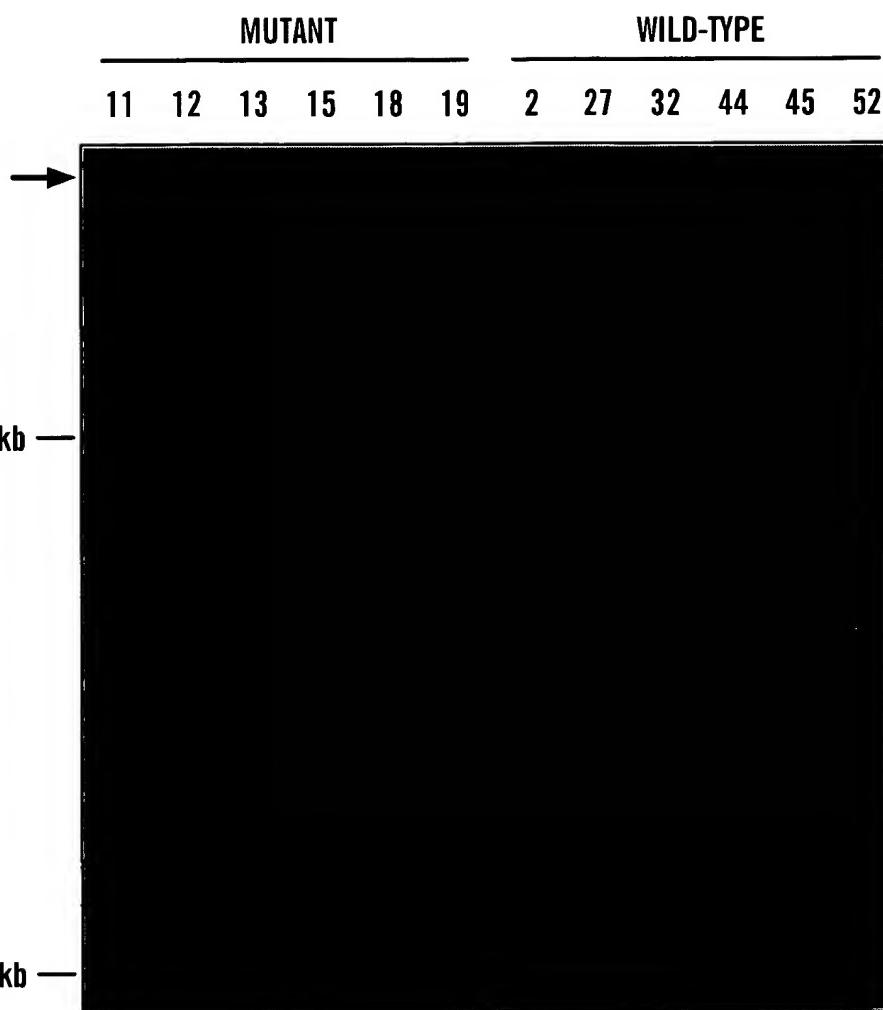
**FIG. 1G**



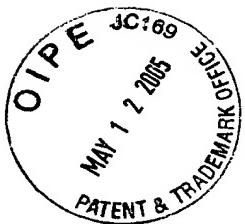
**FIG. 1H**



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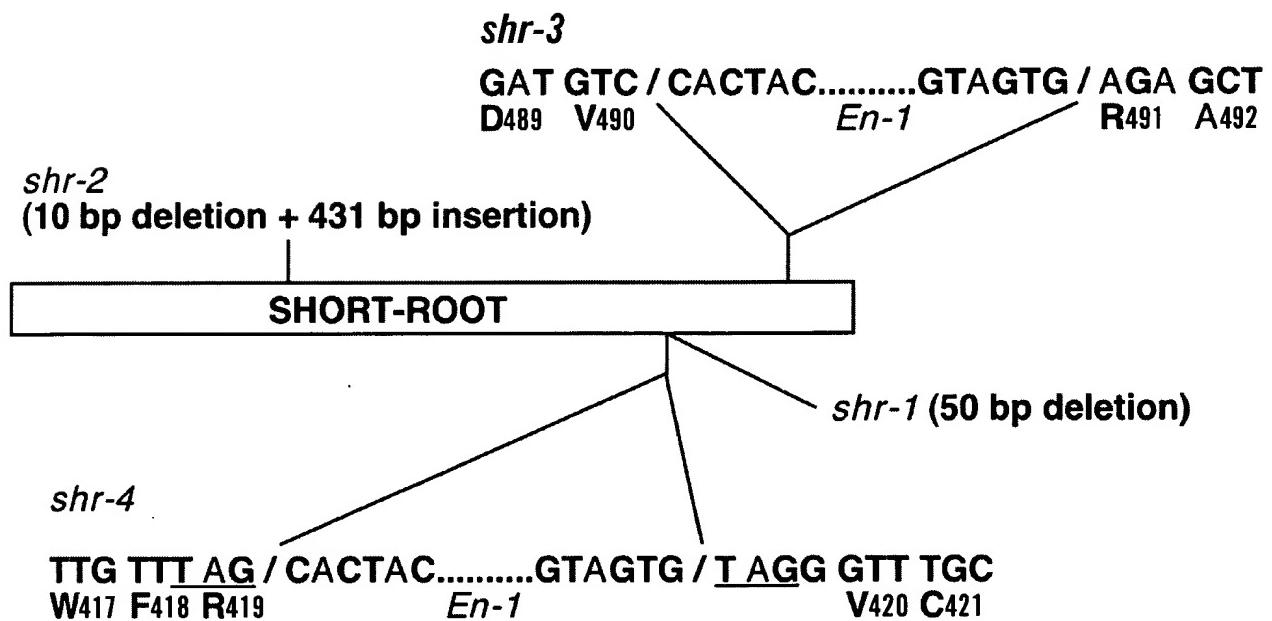


**FIG. 2A**

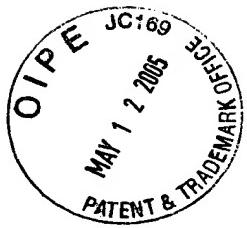


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LS	144	PFIREFTQLTANQAI <del>LEAINGNHQAI</del> HIVDFDINHGQWPPLMQALADRYPA-PTLRITG
GAI	248	PYLKFAHFTANQAI <del>LEAFQGK</del> -KRVHVIDFSMSQGLQWPALMQALALRPGGPPVRLTG
RGA	301	PYLKFAHFTANQAI <del>EAFEGK</del> -KRVHVIDFSMNQGLQWPALMQALALREGGPPTFRLTG
SCR	379	PLVKFSHTANQAI <del>QEAFEKE</del> -DSVHIIIDLIMQGLQWPGLFHILASRPGGPPHVRLTG
SHR	233	PWATFGHVAANGAILEAVDGE-AKI <del>HIVDISSTFCT</del> QWP <del>T</del> LLA <del>T</del> RSDDTPHLRLTT

***FIG. 2B******FIG. 2C***

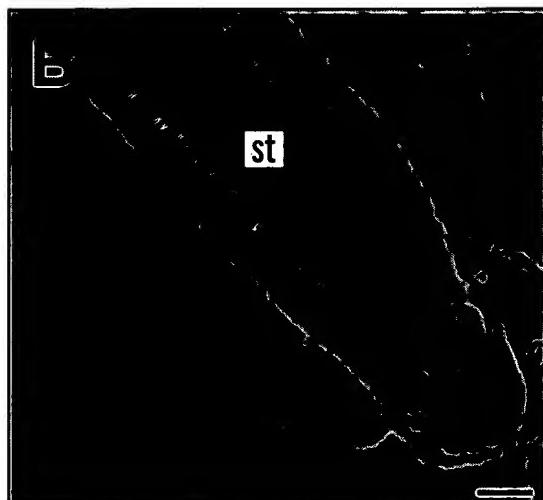
# Replacement Sheet



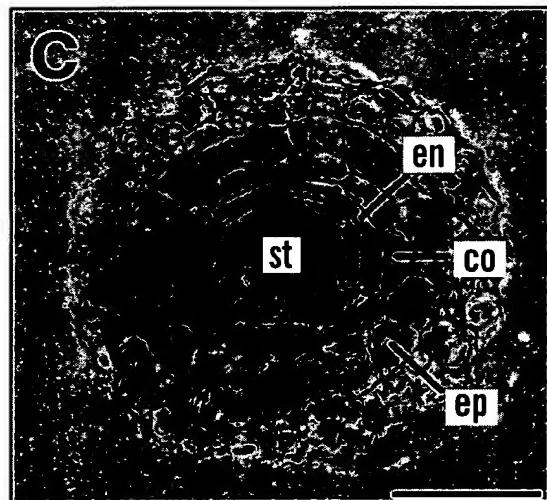
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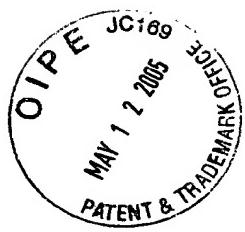
**FIG. 3A**



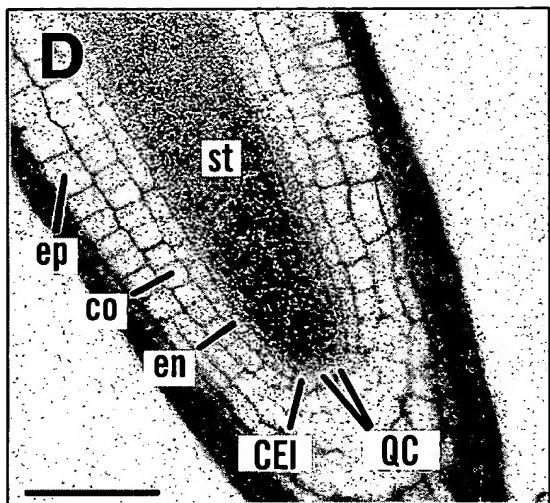
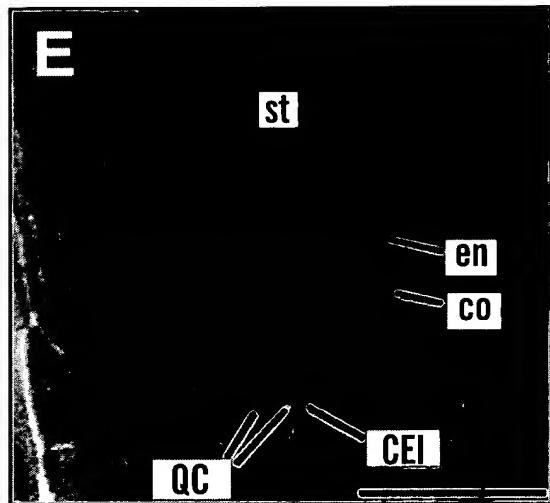
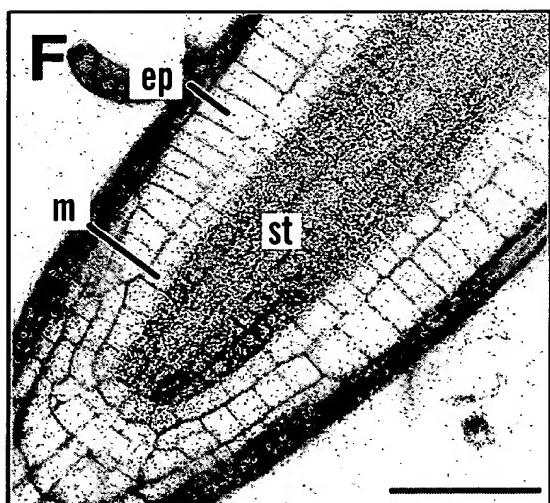
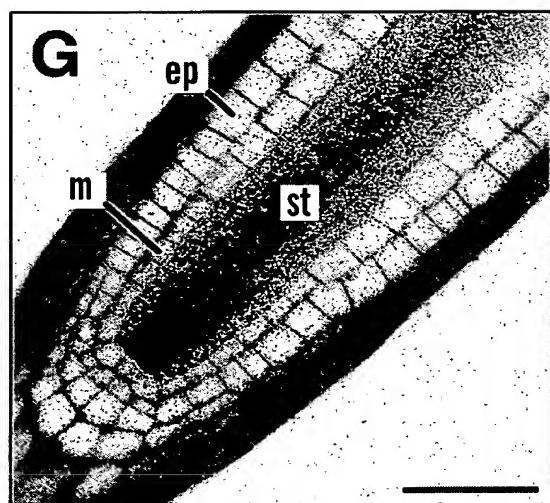
**FIG. 3B**

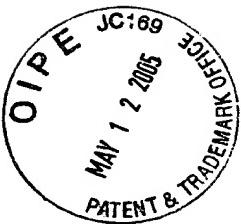


**FIG. 3C**

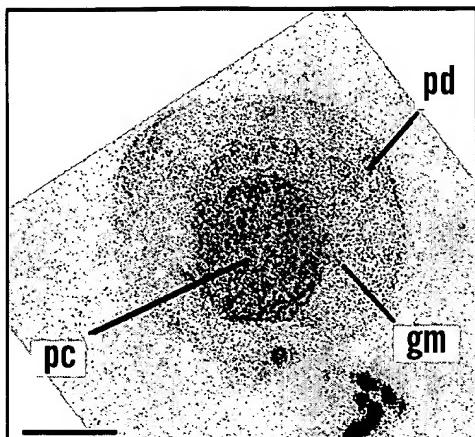


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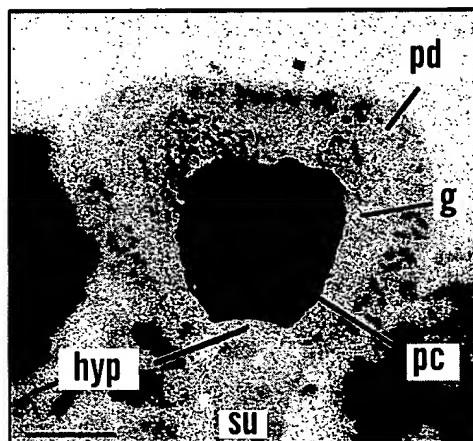
**FIG. 3D****FIG. 3E****FIG. 3F****FIG. 3G**



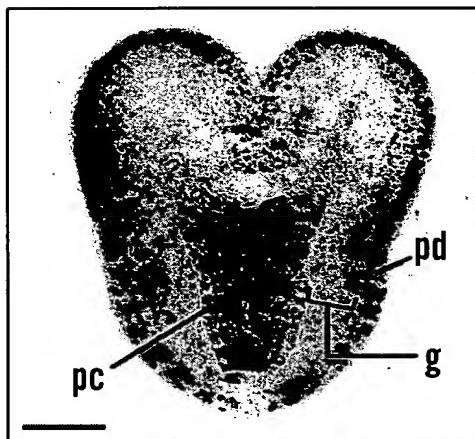
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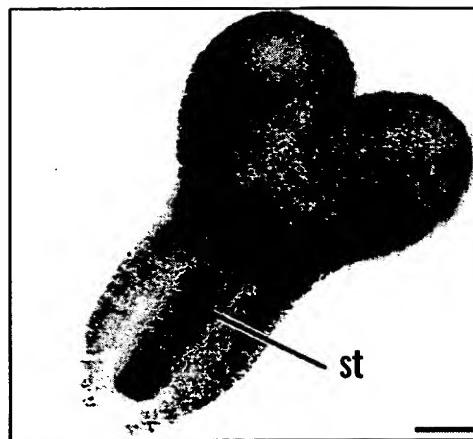
**FIG. 4A**



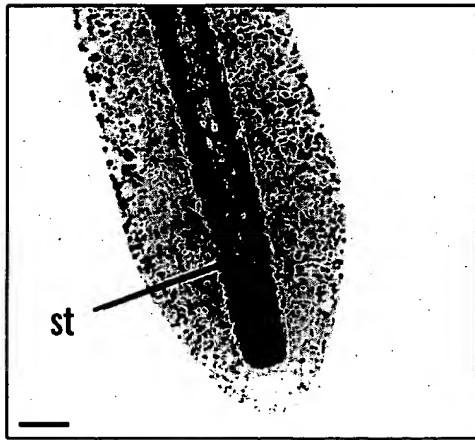
**FIG. 4B**



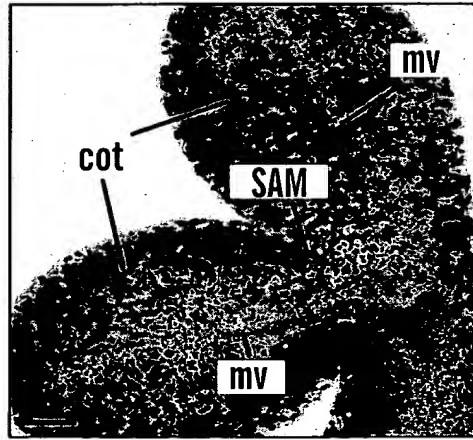
**FIG. 4C**



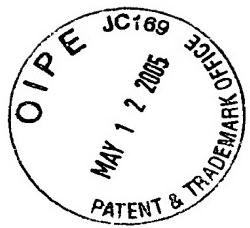
**FIG. 4D**



**FIG. 4E**

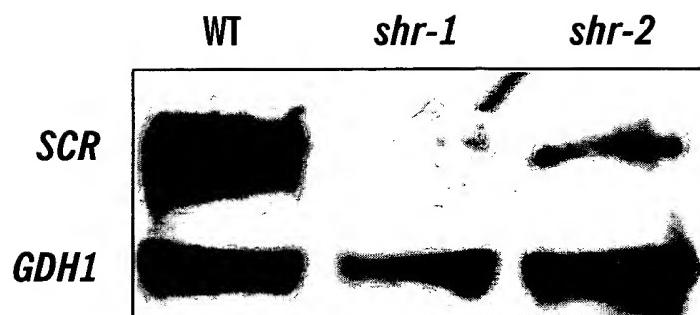


**FIG. 4F**

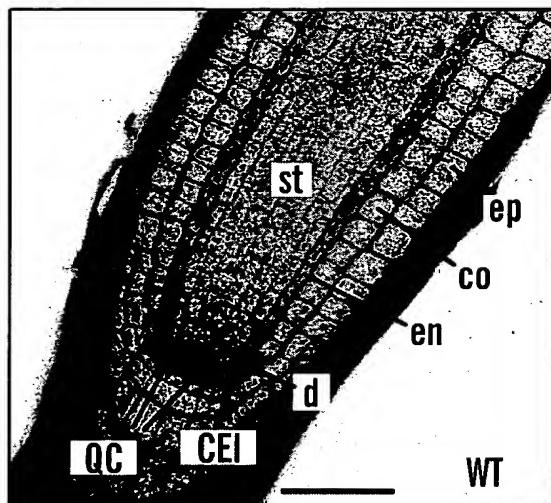


# Replacement Sheet

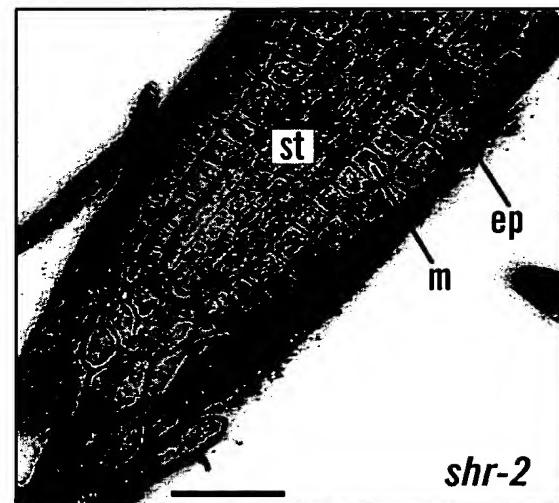
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**FIG. 5A**

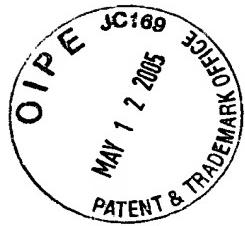


**FIG. 5B**

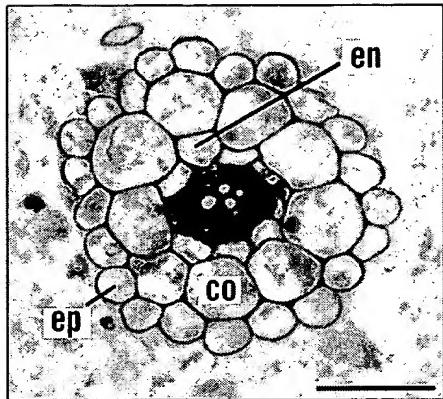


**FIG. 5C**

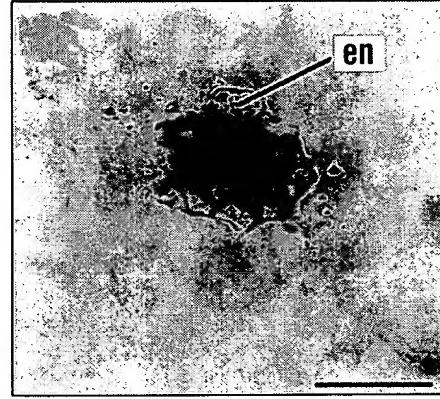
**Replacement Sheet**



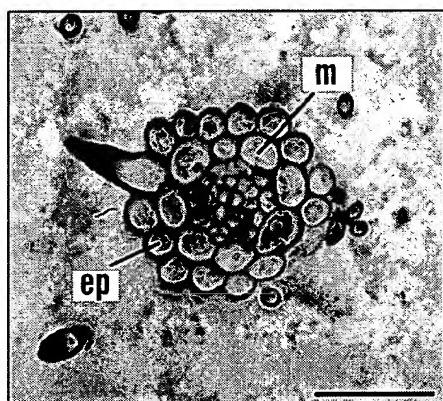
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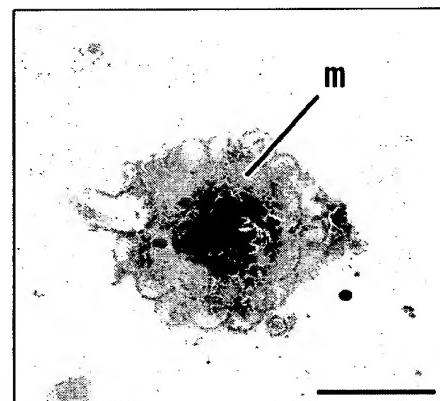
**FIG. 6A**



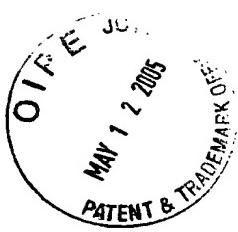
**FIG. 6B**



**FIG. 6C**

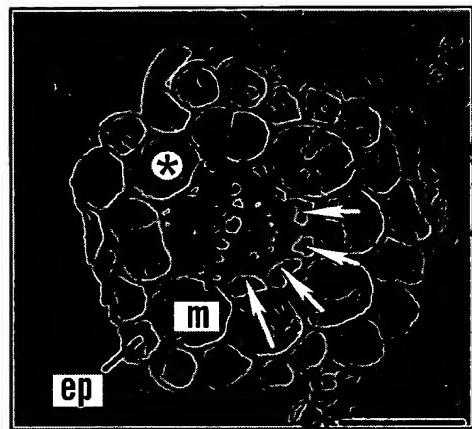


**FIG. 6D**

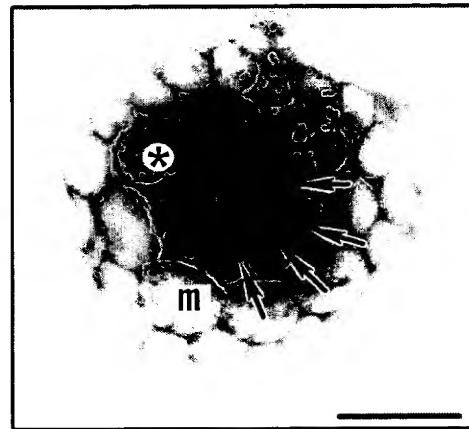


# Replacement Sheet

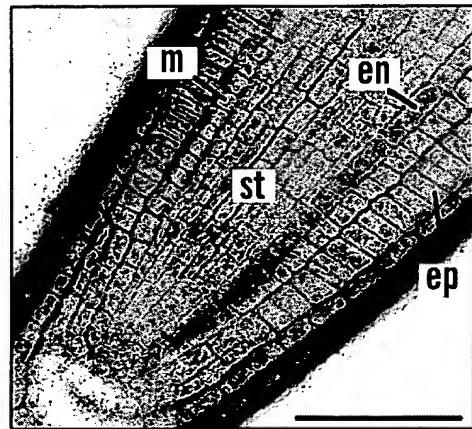
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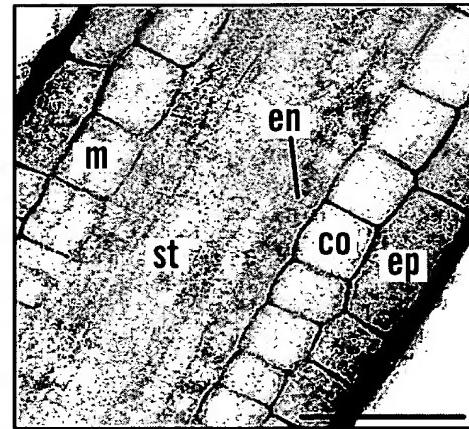
**FIG. 6E**



**FIG. 6F**



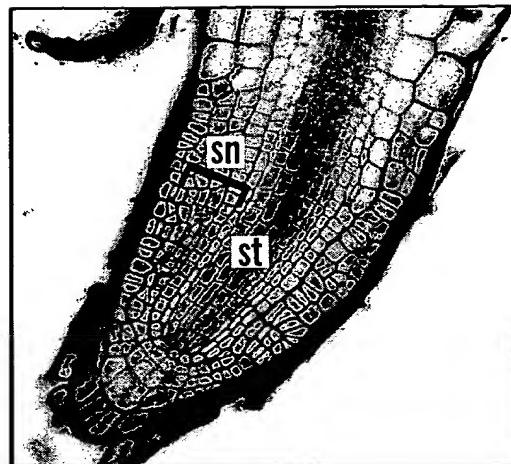
**FIG. 6G**



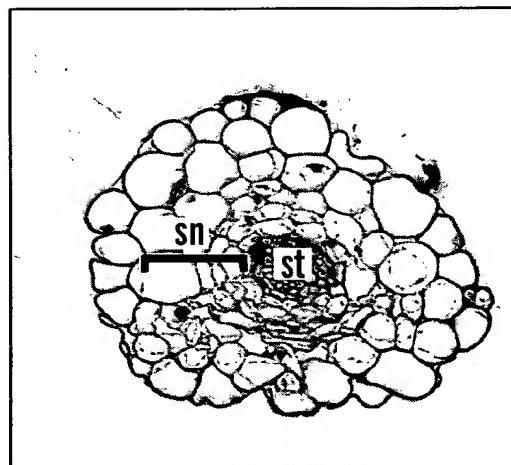
**FIG. 6H**

Replacement Sheet

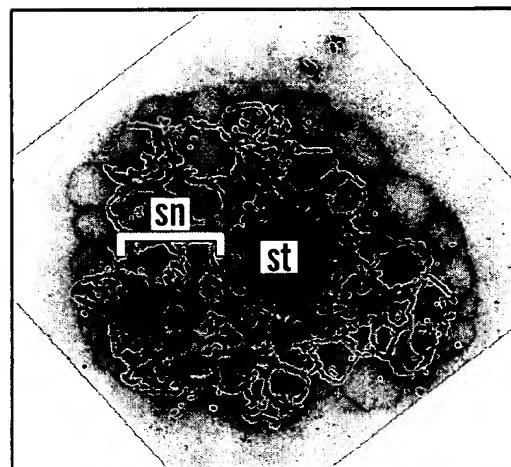
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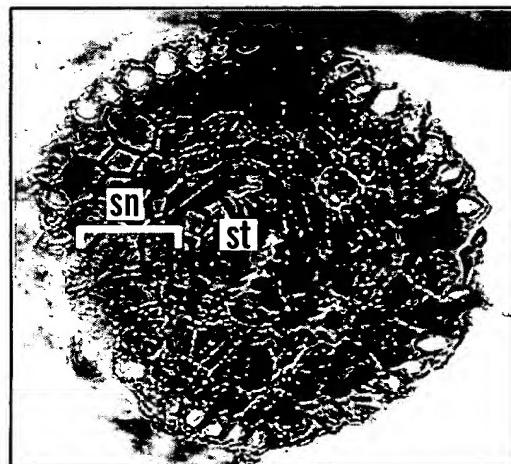
**FIG. 7A**



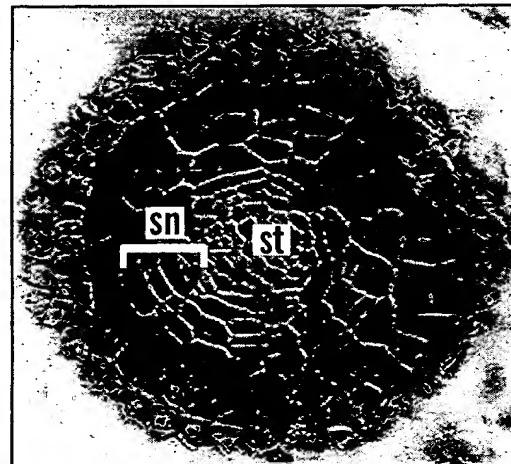
**FIG. 7B**



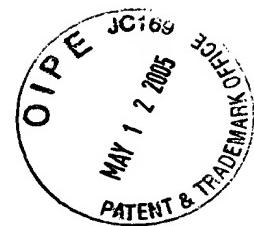
**FIG. 7C**



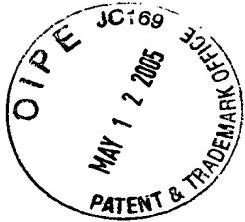
**FIG. 7D**



**FIG. 7E**



# Replacement Sheet



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61 tgtctaaaac gattatgagt ttgggtttt gattggtag aattggattt agtaggacat  
121 tctaactttt ttgttagtct gttgatttag gatgcgtaaa gagtcctttt attttacacc  
181 agttgagact tggatcgat agtacttgaa acacttggtt gtttcatgt atttggccta  
241 tatataaaca aacatcgtaa ttatatacgg attttttcg gaattttacg ccatatctgt  
301 aagtatatat aacatgcgt tcgtttcaa attcatatga tgaacgatcc acgtaagtgc  
361 tactactcct acaatattgc atgagagaga tatgtattta taaatttat tttgaagaag  
421 aaataaagagg gaaggttact tgggtggatc gatgtaaaaa caaaagaaga aaaagcgaaa  
481 cccactaagc cattacatga tatkacccctt ctatcttt tcctctttt tttattttc  
541 tcaggactt tttctactta atgaaacctc caaactatct aactaataca ctccatgt  
601 gaataaagaa aattatataa gatattgtt atattttgtt actagaaaaat atatttgctc  
661 tptaattttt cgtaagttaa atcaacattt ttcagtagaa acaaataatta ctgaaaaaag  
721 taggatcatt attttgtcc aaaatctcag ttagctatag gttttagttaaaaac  
781 acattcttga tttccccaa aaaataaaga gagagaagaa tattgttcaa aagtggctc  
841 ttctctctt aattatgtt tcactaaacc caatttagatt caaacagtct acaaagtcca  
901 aaagataaaac atgggacaac aattcgatgc aaaaaatctt ctttcatgc tctttttt  
961 ttctcttagt ttttaaatta ctaataaaaaa ctcacaaatc caccacccattcttaca  
1021 actcaccttc atctagattt acccactccc accgagaaac acaagaaaaaa aaatatacat  
1081 atataaatat acaagacaac acatgatgct gatgcaatattt acacaacaaa gtattaaatc  
1141 ttagatattt tgggtctccc tttctctat tcattttctt attcattttttt aaaaaaaaaat  
1201 ggatactctc ttttagacttgc ttagtctcca acaacaacaa caatccgata gtatcattac  
1261 aaatcaatct tcgttaagca gaacttccac caccactact ggctctccac aaactgctt  
1321 tcactacaac tttccacaaa acgacgtcgt cgaagaatgc ttcaactttt tcatggatga  
1381 agaagacctt tccttttctt cttctcacca caaccatcac aaccacaaca atcctaataac  
1441 ttactactct ctttcacta ctccccccca ataccatccc gccacatcat caaccccttc  
1501 ctccaccgccc gcagccgcag cttagcctc gccttactcc tcctccggcc accataatga  
1561 cccttccgcg ttctccatac ctcaactcc tccgtccctt gacttctcag ccaatgccaa  
1621 gttggcagac tcggccttc ttgaagcggc acgtccctt tccgacaaag acactgcacg  
1681 tgcgcaacaa atcctatgga cgctcaacga gctcttttccgtacggag acaccgagca  
1741 aaaactggct tcttacttcc tccaagctt cttcaaccgc atgaccgggtt caggcgaacg  
1801 atgctaccga accatggtaa cagctcagc cacagagaag acttgcctt tcgagtcaac  
1861 gcggaaaaact gtactaaagt tccaagaagt tagccccgg gccacgttt gacacgtggc  
1921 ggcaaacgga gcaatcttgg aagcagtaga cggagaggca aagatccaca tcgttgcacat  
1981 aagctccacg tttgcactc aatggccgac tcttctagaa gcttttagcca caagatcaga  
2041 cgacacgcct cacctaaggc taaccacagt tgctgtggcc aacaagttt tcaacgatca  
2101 aacggcgtcg catcgatga tgaaagagat cggaaacccga atggagaaat tcgctaggct  
2161 tatggagtt ctttcaaat ttaacattat tcacacgtt ggagatttat ctgagtttga  
2221 tctcaacgaa ctgcacgtt aaccagacga agtcttggcc attaactgcg taggcgcgt  
2281 gcatggatc gttcacgtg gaagccctag agacgctgtg atatcgagtt tccgacgggtt  
2341 aagaccgagg attgtgacgg tcgtagaaga agaagctgat ctgtcggag aagaagaagg  
2401 tggcttgcgt gatgagtttgc tgagagggtt tggagaatgt ttacgatggg ttagggttt  
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2821 aattc

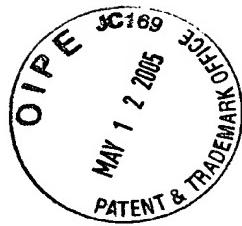
**FIG. 8**

# Replacement Sheet

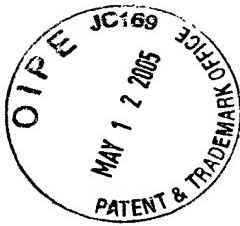
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DPSAFSIPQT PPSFDFSANA KWADSVLLEA ARAFSDKDTA RAQQILWTLN ELSSPYGDTE  
QKLASYFLQA LFNRMTGSGE RCYRTMVTAA ATEKTCSFES TRKTVLKQFQE VSPWATFGHV  
AANGAILEAV DGEAKIHIVD ISSTFCTQWP TLLEALATRS DDTPHLRLTT VVVANKFVND  
QTASHRMMKE IGNRMKFAR LMGVPFKFNI IHVGDLSEF DLNELDVKPD EVLAINCVA  
MHGIASRGSP RDAVISSFRR LRPRIVTVVE EEADLVGEEE GGFDDFLRG FGECLRWFHV  
CFESWEESFP RTSNERLMLE RAAGRAIVDL VACEPSDSTE RRETARKWSR RMRNSGFGAV  
GYSDEVADDV RALLRRYKEG VWSMVQCPDA AGIFLCWRDQ PVVWASAWRP T

**FIG. 9**



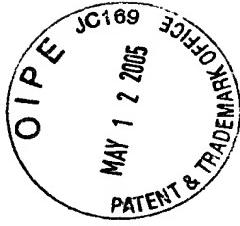
# Replacement Sheet



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121 cacaaactgc ttatcactac aactttccac aaaacgacgt cgtcgaagaa tgcttcaact  
181 ttttcatgga tgaagaagac ctttcttctt ctttcttca ccacaaccat cacaaccaca  
241 acaatcctaa tacttactac ttccttca ctactcccac ccaataccat cccgccacat  
301 catcaacccc ttccctccacc gcccagccg cagctttagc ctcgccttac tcctccctcg  
361 gccaccataa tgacccttcc gcgttctcca tacctcaaac tcctccgtcc ttgcacttct  
421 cagccaatgc caagtggca gactcggtcc ttcttgaagc ggcacgtgcc ttctccgaca  
481 aagacactgc acgtgcgaa caaatcctat ggacgctcaa cgagctctct ttcgcgtaa  
541 gaaaaccgct tcattttctt tgtatttgc tgaggtagg attagaccat tggttgttac  
601 tttcgaattc ttccaattta gttgttactt tcgaatttctt ccatctctta gttactaaa  
661 acaaacttat gtccccata tttctccaac aatttgttga gtggtagctt acgtttact  
721 gtatacgctt ttgcaggta tatcagcaca accattaatg atggcccggg atgtttgatg  
781 ctaagatgtc ctgacccatc ttgtcttgct gctgttggc atgatatggt tgacaaatta  
841 gcgtctgaag acaaaaaggaa gaagtacaac agatattttc ttaggtctta tattgaagac  
901 aacagaaaagg taagcagtct agaaaattta tatcacacag actggattttt atgtcgctgg  
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1021 gtttcaggcg aacgatgcta ccgaaccatg gtaacagctg cagccacaga gaagacttgc  
1081 tccttcgagt caacgcgaaa aactgtacta aagttccaag aagtttagccc ctggccacg  
1141 tttggacacg tggcgcaaa cggagcaatc ttggaaagcag tagacggaga ggcaaaagatc  
1201 cacatcggtt acataagctc cacgtttgc actcaatggc cgactcttctt agaagcttta  
1261 gccacaagat cagacgacac gcctcaccta aggctaacca cagttgtcgt ggccaacaaag  
1321 tttgtcaacg atcaaacggc gtcgcacatcgg atgatgaaag agatcgaaa ccgaatggag  
1381 aaattcgcta ggcttatggg agttcttca aaatttaaca ttattcatca cggtggagat  
1441 ttatctgagt ttgatctcaa cgaactcgac gttaaaccag acgaagtctt ggccatttaac  
1501 tgcgttaggcg cgatgcatttca gatcgcttca cgtggaaagcc ctagagacgc tgtgatatcg  
1561 agttccgac ggttaagacc gaggattgtg acggtcgttag aagaagaagc tgatcttgc  
1621 ggagaagaag aaggtggctt tgatgatgag ttcttggagag gttttggaga atgtttacga  
1681 tggtttaggg ttgcatttca gtcattggaa gagagtttc caaggacgag caacgagagg  
1741 ttgatgcttag agcgtgcacg gggacgtgcg atcgttgcatttgc ttgtggctt tgagccgtcg  
1801 gattccacgg agaggcgaga gacagcgagg aagtggtcga ggaggatgag gaatagtggg  
1861 tttggagcgg tgggtatag tgatgaggtg gcggatgatg tcagagctt gttgaggaga  
1921 tataaagaag gtgtttggc gatggatcag tgccttgcatttgc ccggccggat attcctttgt  
1981 tggagagatc agccgggtggt ttggcttagt gcgtggccggc caacgtaaag gtttgggg  
2041 atttttcat aaggaaattc

**FIG. 10**

**FIG. 11**

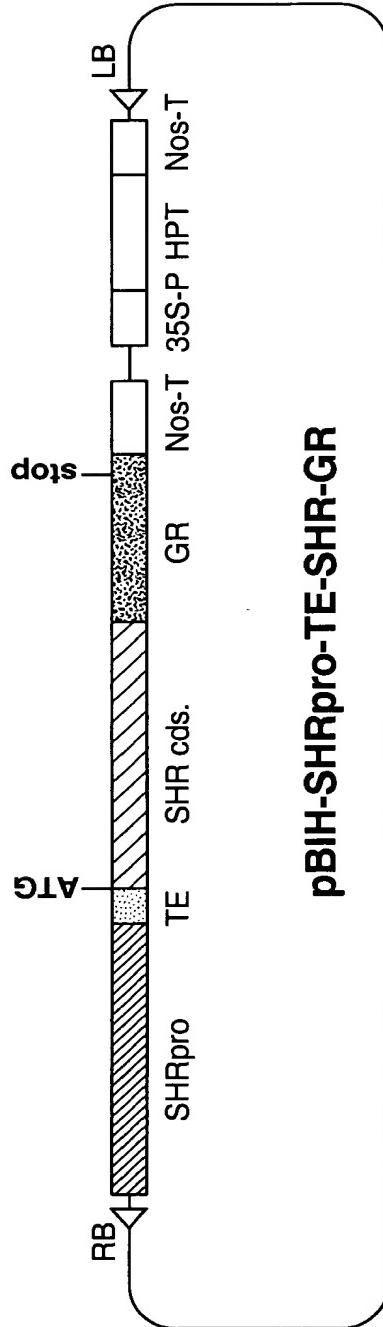
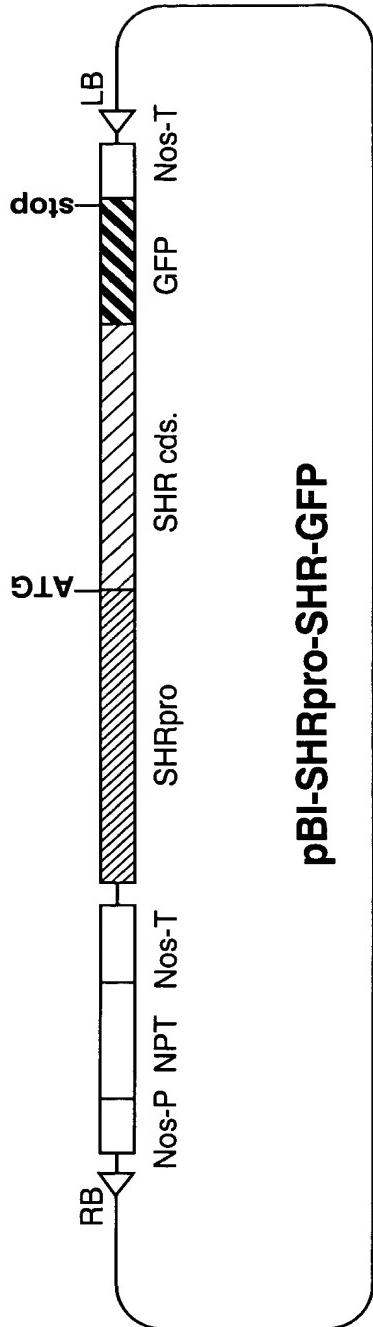
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## 2.5-kb SHORT-ROOT PROMOTER SEQUENCE

10	20	30	40	50	
<u>1234567890</u>	<u>1234567890</u>	<u>1234567890</u>	<u>1234567890</u>	<u>1234567890</u>	
AGAAGCAGAG	CGTGGGGTTT	CTTCTAATAA	TTGTAGAAGA	AACTGATCAT	50
GAGAACATT	GATCTACCAAG	AGATGGTGAT	GACTCATAAG	ATGTAATAT	100
CTACTGCATT	ATGTCTAGCC	TAGGCTATAA	TGTAGATTTG	ATCACTTTCT	150
TCATTAATTA	GTGGGAATT	TTAGCATGAT	ATAGCATATA	TCTAAATATG	200
TCCGAAACTT	TCCTACATAC	TAGAAAATAT	GGAGAGTTAT	GTAATGTAGG	250
TTTGCTTGT	AATATACAAA	ATAACATCAT	CATTTAGTTT	TTAGATTTT	300
TATTTTATT	TTTATAATGG	TGCTACGTAC	GTGGCGATCA	AATTATTCCA	350
ATTTTGAGAC	TTCGGGATT	AAACGAAAT	TAAACAATGG	GCATGAGCTC	400
GGGGGGATAG	ACAAGATTAA	TGCTTTGTAT	CGAGACAAAC	GAGAAAATCA	450
TGATGAGCCT	ATGCATTAAG	TGCCGTTGGT	TAATTAGAGG	TTCGCATATA	500
CATAAACAG	TAGACATATG	GATAAATATG	AACACACACA	CCAAAAAAAGT	550
GGGAAATCTA	AATAAGTGT	GAGAATAATA	AGTCCTCAGG	TGGGAGATTC	600
AAAGAGAGGA	CAATGAAGGG	TATATAGACT	CTAAACAAAAA	ATGGCATGAC	650
TTAGTGGAGA	GGGTTTTAAA	TTGAAACAAG	TAGGATTGAA	GAACAAGAAA	700
ACAAAGAAGC	ATGCCCTAGA	TTTCTGAGAT	AATAATTACA	CATTGCTGTT	750
TATATAAGGT	AAGAGAATAT	GACACATTGG	TTGGTTTCTT	ACGGGTAAAT	800
GTGAAGAAAA	AAAAATAGTA	ATATTGAGA	AAATCTAAA	TAGTAAAGAG	850
GTATATATGG	AGAAGAAGAG	AGAAAAGGGA	AAAATAGTGG	CAGAGAATGG	900
AGAGAGGT	GGAGGCAAAG	GCAAATGTGG	AGCTTTGATG	ATGTTGATGC	950
ACGCCGTCAG	CTTTCTTCA	CGCCTGCTCC	CACTCACTCA	CACCTATGAA	1000
CATTCTCTCT	CTATTTTATA	ATTATATTCA	CATGTCTCTA	TGTTACTATG	1050
TAAATGGTGA	CCACTTAAGT	ATTTATATAT	CATGTATATA	TCTTATAGGT	1100
ATCATACAAA	ATGGTCATGA	AACTTTGCA	ATTCACATCT	ACTTGTTCAT	1150
TGTAGATGCT	AGCTTTTCAC	ATGTTTGAA	AATTAGTCTG	GATCTGAAAT	1200
TCTTTAATTA	GCATTGTTT	GTTGGTCAAC	GTTTAATTTC	TTGATTATTG	1250
ATGTCAAAAA	TTCAGAGCGT	TCAGAACTCT	TACACTAATT	TCTTAAAAAT	1300
AATCGATTA	GAGAAAATAG	AGTTTCATG	CACCAGTGT	GATAGTAACG	1350
TAGTCGCGGA	ATGTCTAAA	CGATTATGAG	TTTGGTGT	TGATTGGTTA	1400
GAATTGGTAT	TAGTAGGACA	TTCTAACTTT	TTTGTAGTC	TGTTGATTAA	1450
GGATGCGTAA	AGAGTCTTT	TATTTTACAC	CAGTTGAGAC	TTGGGATCGA	1500
TAGTACTTGA	AACACTTGGT	TGGTTTCATG	TATTTGGCCT	ATATATAAAC	1550
AAACATCGTA	ATTATATACG	GATTTTTTC	GGAATTTCAC	GCCATATCTG	1600
TAAGTATATA	TAACATGCAT	GTCGTTTCA	AATTCAATG	ATGAACGATC	1650
CACGTAAGTG	CTACTACTCC	TACAATATTG	CATGAGAGAG	ATATGTATT	1700
ATAAAATT	TTTGAGAAGA	GAAATAAGAG	GGAAGGTTAC	TTGGGTGGAT	1750
CGATGTGAAA	ACAAAAGAAG	AAAAGCGAA	ACCCACTAAG	CCATTACATG	1800
ATATCGACCT	TCTTATCTT	TTCTCTTTA	TTTTATT	CTCAGGACTT	1850
TTTCTACTT	AATGAAACCT	CCAAACTATC	TAACTAATAC	ACTCCCATGT	1900
AGAATAAAGA	AAATTATATA	AGATATTGTT	GATATTGTT	AACTAGAAAA	1950
TATATTGCT	CTGTAATT	TCGTAAGTTA	AATCAACATT	TTTCAGTAGA	2000
AACAAATATT	ACTGCAAAAA	GTAGGATCAT	TATTTTGTC	CAAAATCTCA	2050
GTTAGCTATA	GGGTTGTAGT	AAAAACAAAA	CACATTCTTG	ATTGCCCCA	2100
AAAAATAAAG	AGAGAGAAGA	ATATTGTTCA	AAAGTGGTCT	CTTCTCTCTC	2150
TAATTATGTT	TTCACTAAC	CCAATTAGAT	TCAAACAGTC	TACAAAGTCC	2200
AAAAGATAAA	CATGGGACAA	CAATTCGATG	CAAAATCC	TCTTTTCATG	2250
CTCTTTTTT	ATTCTCTAGT	CTTTAAATT	ACTAATAAA	ACTCACAAAT	2300
CCACCAAACC	CATTCTCTAC	AACTCACCTT	CATCTAGATT	TACCCACTCC	2350
CACCGAGAAA	CACAAGAAAA	AAAATATACA	TATATAATA	TACAAGACAA	2400
CACATGATGC	TGATGCAATA	TACACAACAA	AGTATTAAT	CTTAGATATT	2450
GTGGGTCTCC	CTTTCTTCTA	TTCATTTCT	TATTCATTAA	AAAAAA	2500
TG					2502

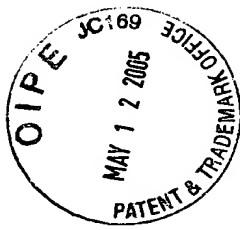
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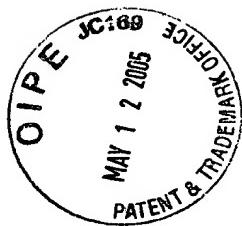


**RB**, right border sequence from *Agrobacterium* Ti plasmid  
**SHRpro**, 2.5-Kb 5' upstream region of *SHORT-ROOT* gene  
**TE**, translational enhancer element of tobacco etch virus  
**SHR cds**, *SHORT-ROOT* protein coding region  
**GR**, rat glucocorticoid receptor domain coding sequence  
**GFP**, green fluorescent protein coding sequence  
**Nos-T**, transcription terminator of nopaline synthetase gene  
**35S-P**, cauliflower mosaic virus 35S promoter  
**HPT**, hygromycin phosphotransferase coding sequence  
**NPT**, neomycin phosphotransferase coding sequence  
**LB**, left border sequence from *Agrobacterium* Ti plasmid

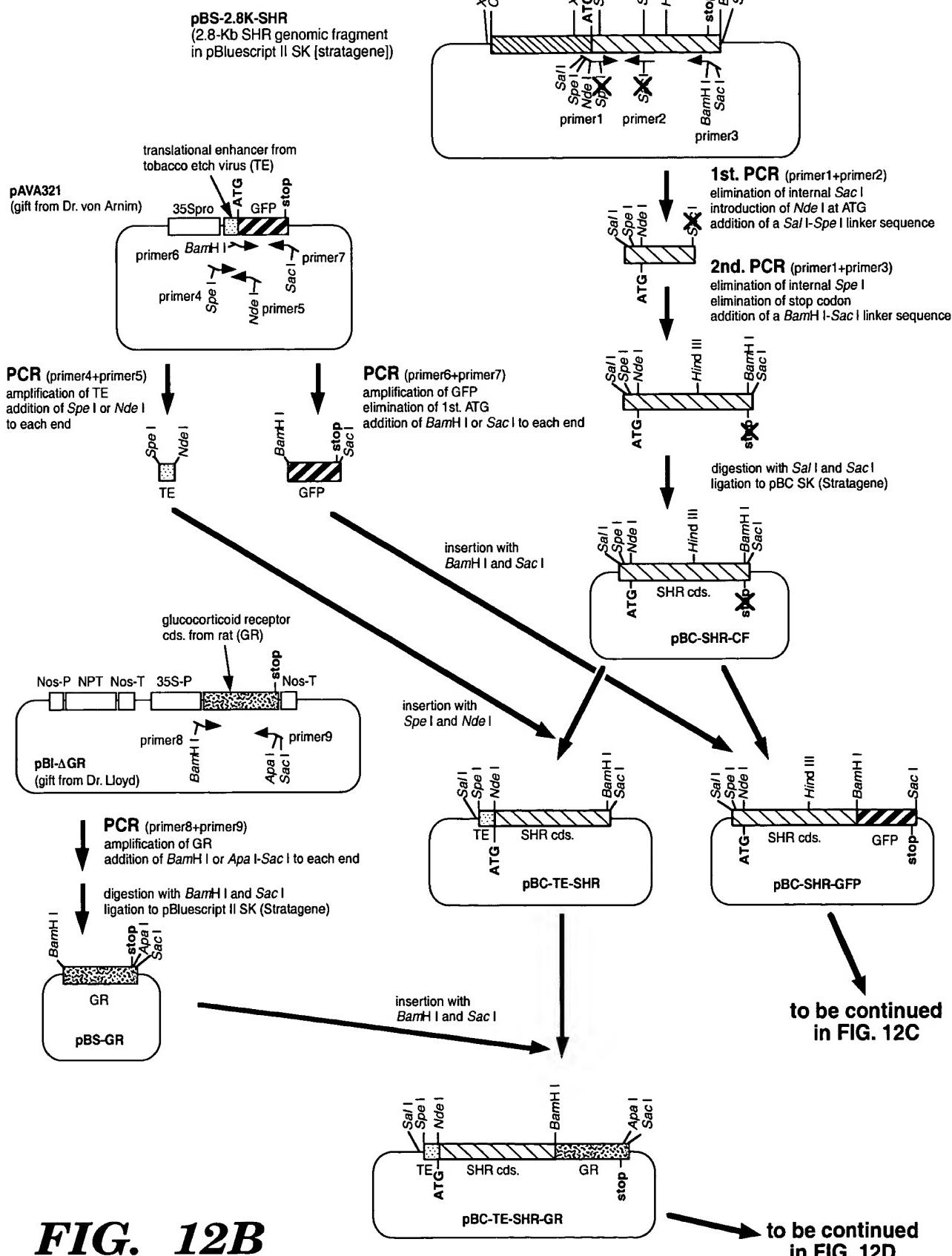
**FIG. 12A**



Replacement Sheet

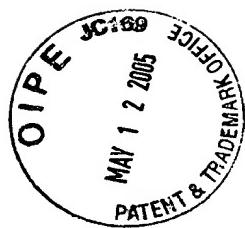


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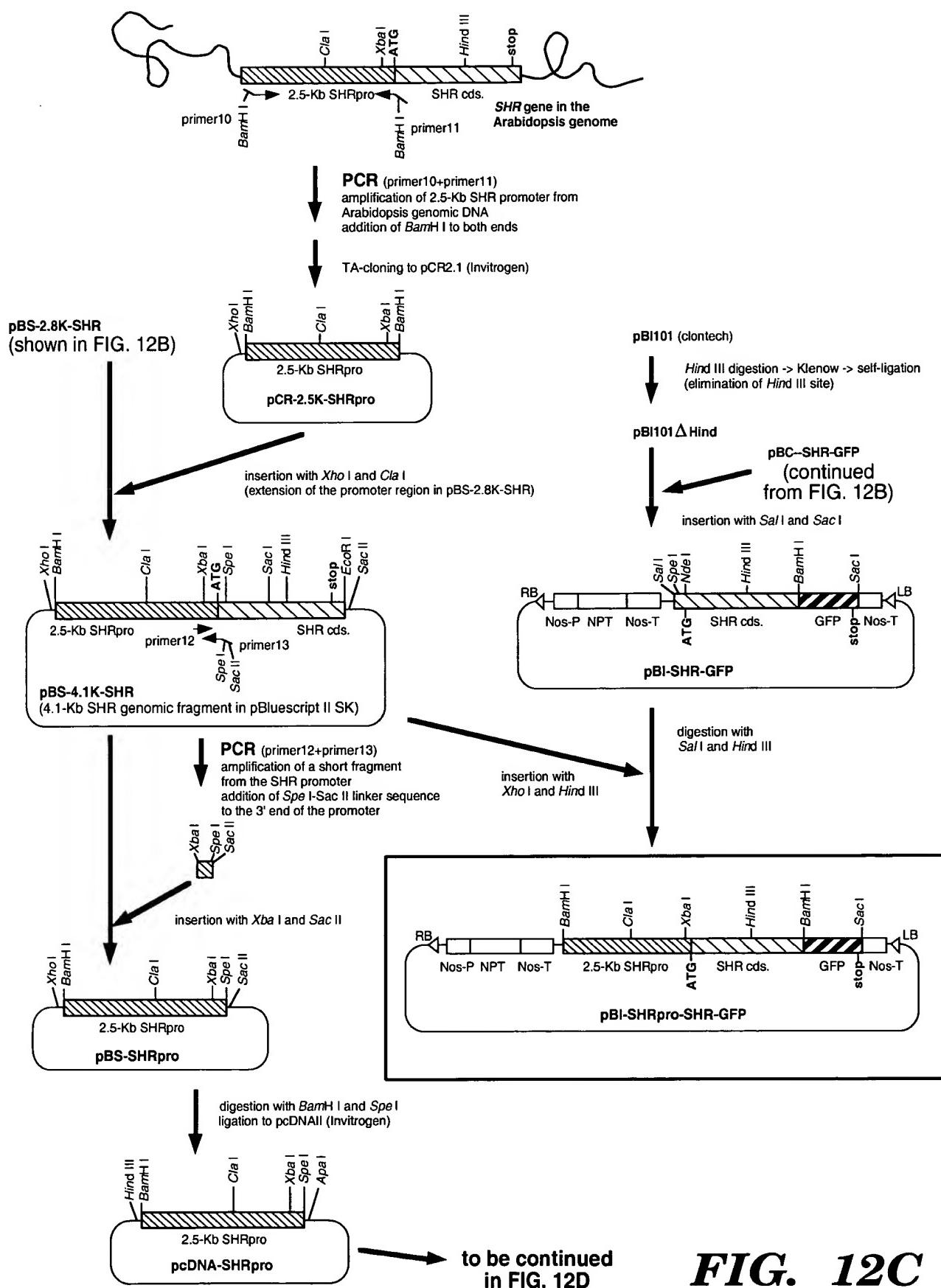


**FIG. 12B**

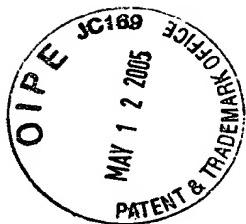
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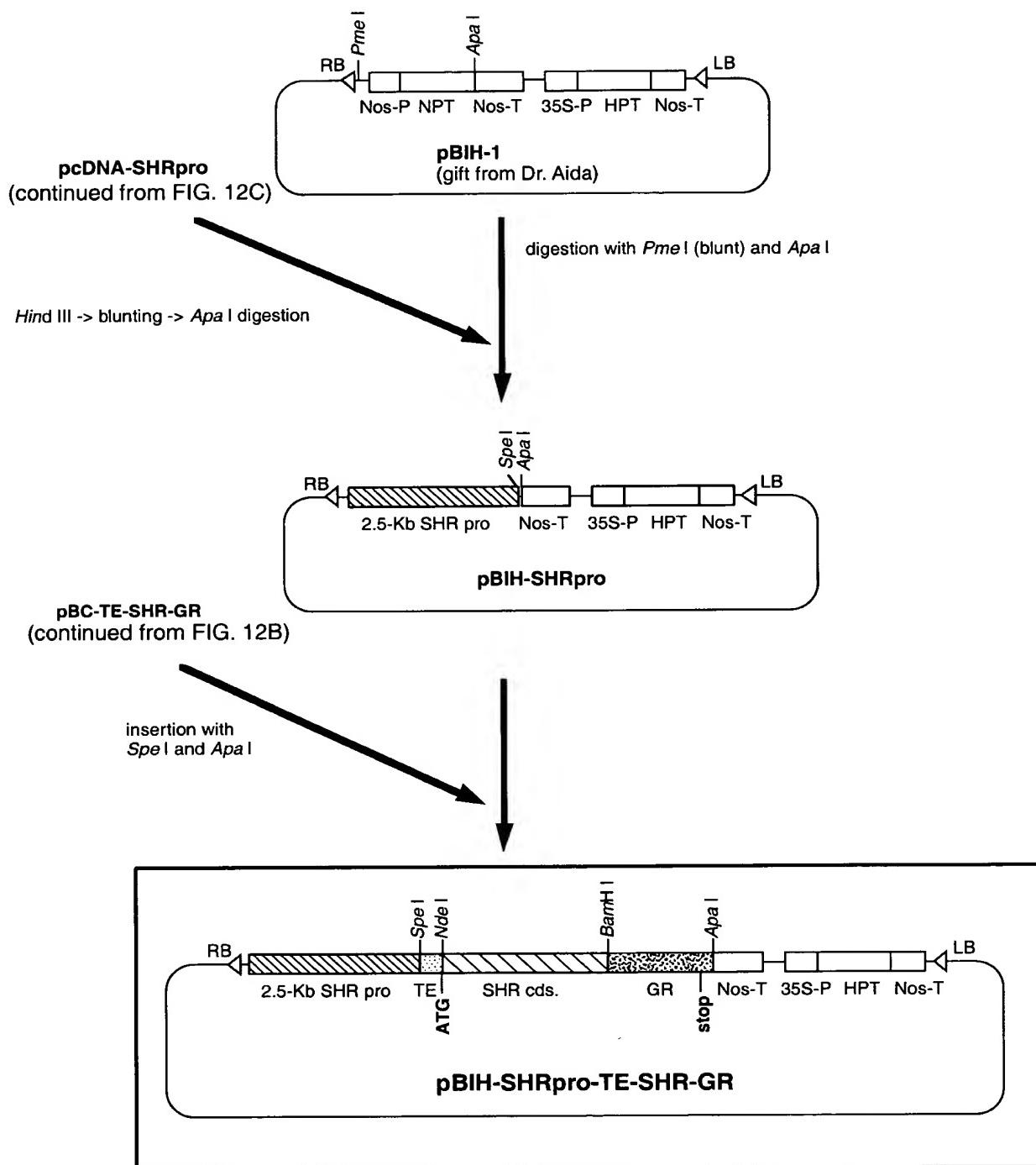
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**FIG. 12C**

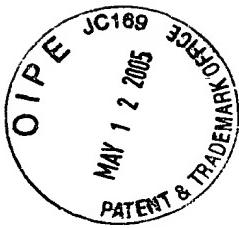


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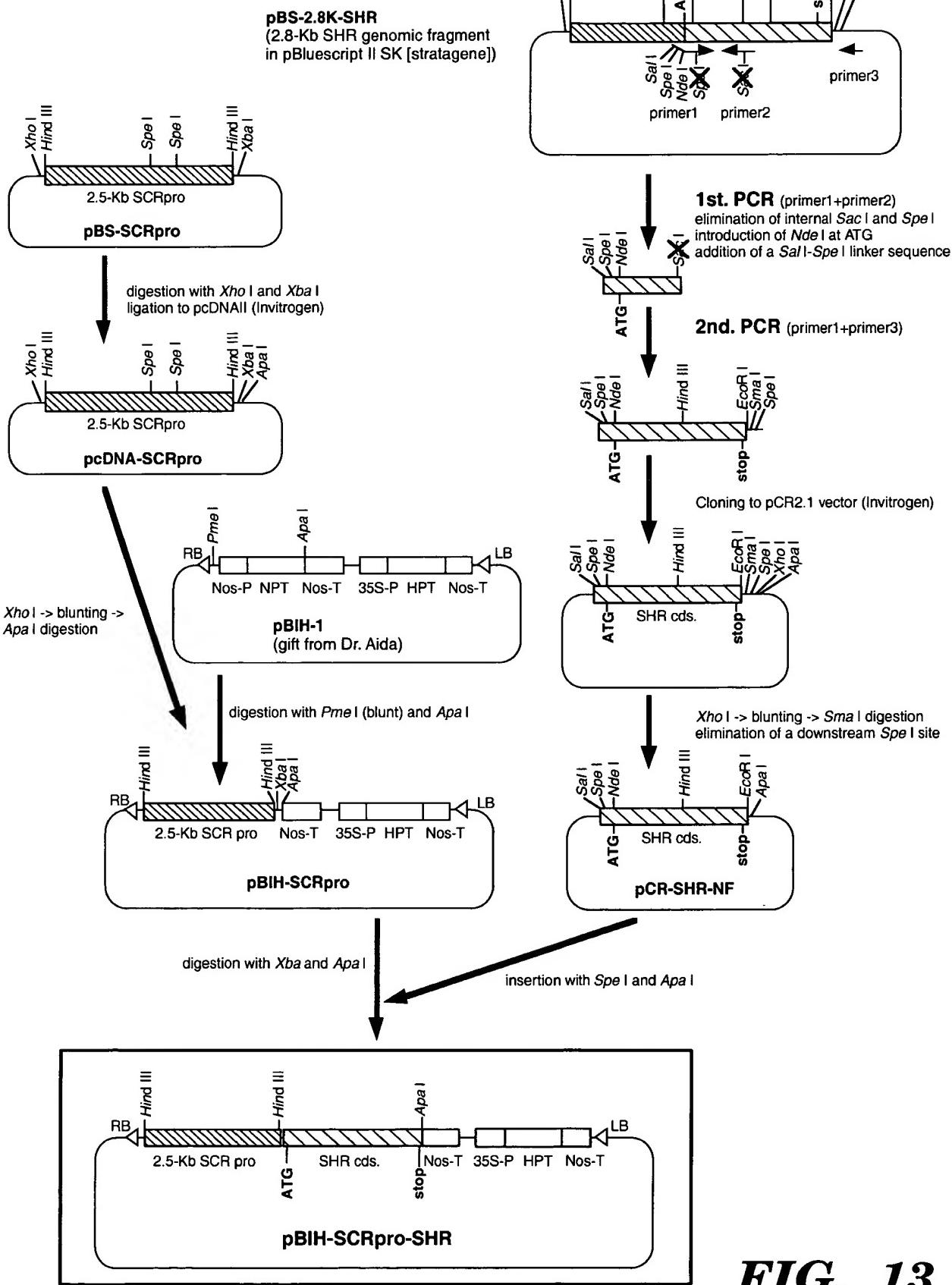


**FIG. 12D**

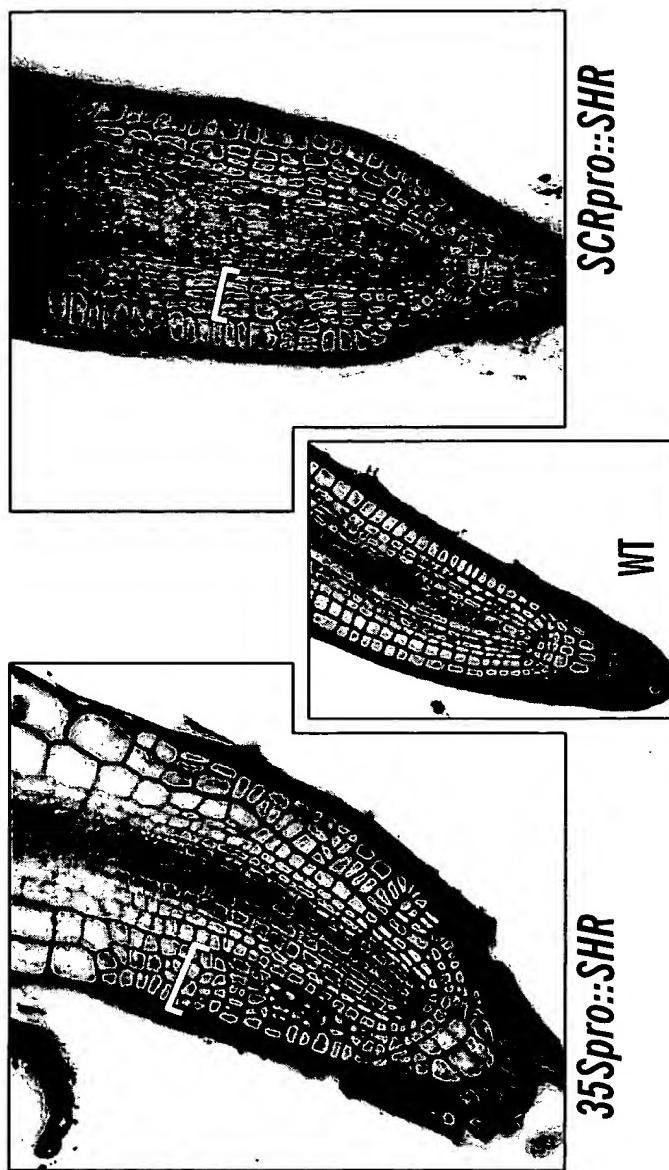
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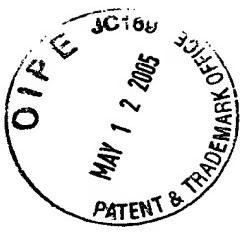


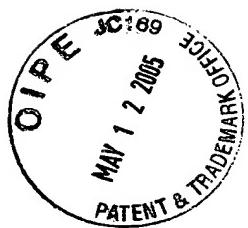
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ECTOPIC *SHR* EXPRESSION CAUSED ABNORMAL ROOT CELL DIVISIONS

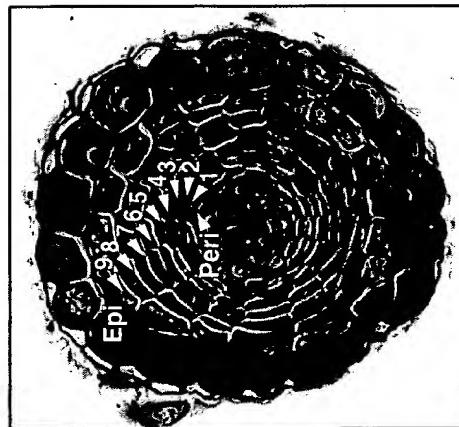
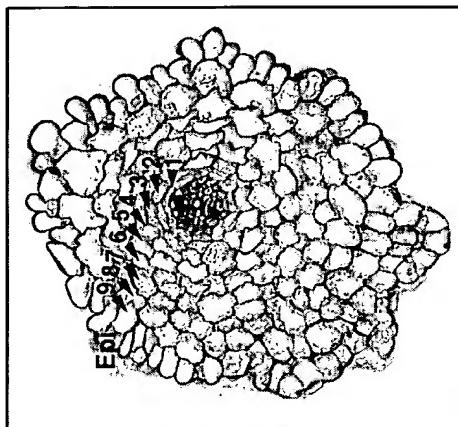
FIG. 14



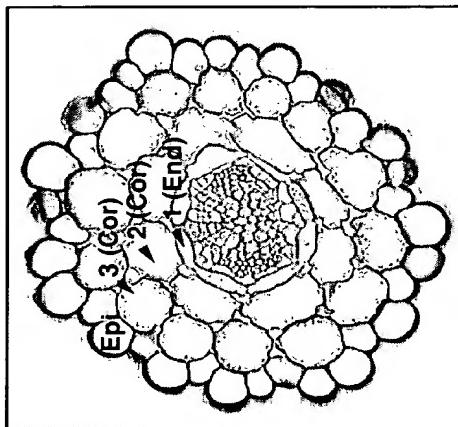


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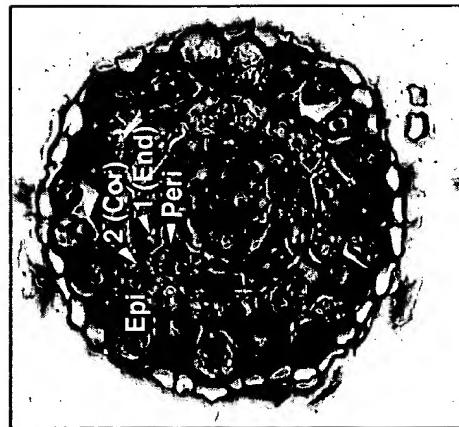
*SCRpro::SHR transgenic*



WT



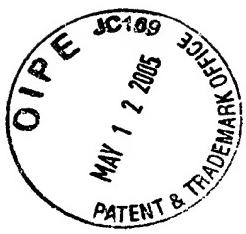
hypocotyl



root

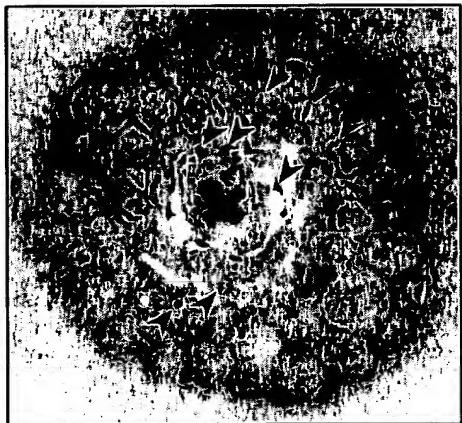
ECTOPIC *SHR* EXPRESSION UNDER THE *SCR* PROMOTER RESULTED  
IN THE INDETERMINATE CELL DIVISIONS IN GROUND TISSUE.

FIG. 15

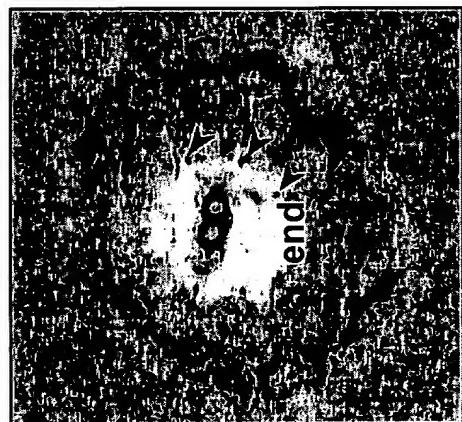


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*SCRpro::SHR transgenic*



WT



Casparyan strip occurs ectopically in the *SCRpro::SHR* transgenic root

**FIG. 16**